



**Department of
Environmental Protection
Bureau of Land & Water Quality Nov. 1999**

O&M Newsletter

A monthly newsletter for wastewater discharge licensees, treatment facility operators, and associated persons

**MERCURY SAMPLING &
ANALYSIS**

***Certified Labs and Equipment
Suppliers***

The Department of Environmental Protection has changed the method for analyzing wastewater effluent for total mercury from EPA Method 245.1 to EPA Method 1631. System operators will have to utilize the services of new laboratories that are certified to analyze samples according to this new method. In addition, this new laboratory method calls for the samples to be collected using EPA Method 1669, also known as "clean techniques". This will require the operators to purchase some new equipment; a sampling device of some type depending on your sample point, non-talc gloves, and tyvek suits.

Recently, I have received numerous inquiries concerning certified laboratories and equipment suppliers. I have compiled a partial list of laboratories and equipment suppliers for your convenience. . The laboratory you are currently utilizing may be able to arrange for your sample to be analyzed by one of the certified laboratories. If not, you can choose from the list below.

If you have any questions, please feel free to contact me at 287-4868.

Thank you,
Sterling Pierce
Maine DEP

Laboratory Listing

Axis Environmental Systems
Sydney, BC
Contact: Mary McFarland
604-656-0881

Frontier Geosciences
Seattle, WA
Contact: Ed Gieger
206-622-6960

Battelle / Marine Sciences
Sequim, WA
Contact: Eric Crecelius
360-683-4151

University of Maine, Orono

Fall 1999 Exam

About 85 people have signed up for the fall 1999 Wastewater Operator Certification Exam, which will be given Wednesday -- November 17, 1999 in the usual locations, South Portland, Bangor and Presque Isle. Those of you who have signed up to take the test should have received a conformation letter from us by now. If you haven't received such a letter, please contact Leslie Rucker at 287-9031 A.S.A.P.

Dick Darling

UPCOMING TRAINING COURSES

November 30, 1999 in Skowhegan, ME, The Use of Selectors to Improve Activated Sludge Operation – approved for 6 hours, sponsored by JETCC (207) 767-2649

December 2, 1999 in Bangor, ME, Using Computerized Databases in WWTP – approved for 6 hours, sponsored by JETCC (207) 767-2649

December 2, 1999 in Kittery, ME, One Plan – Integrated Contingency Planning - approved for 6.0 hours, sponsored by Maine Rural Water (207) 729-6569.

December 9, 1999 in Waterville, ME, Troubleshooting Aerated Lagoons – approved for 5.0 hours, sponsored by NEIETC (978) 323-7929.

December 9, 1999 in Brunswick, ME, One Plan – Integrated Contingency Planning - approved for 6.0 hours, sponsored by Maine Rural Water (207) 729-6569.

December 16, 1999 in Augusta, ME, Ambient Water Quality Sampling & Biomonitoring – approved for 6 hours, sponsored by JETCC (207) 767-
December 14 & 15, 1999 in Freeport, ME, Maine Rural Water Association Annual Meeting – various sessions approved for a total of 7.25 hours, sponsored by Maine Rural Water (207) 729-6569.

Dick Darling

For Practice

1. The term mg (milligrams) in the expression mg/L is a measure of
 - a. Volume
 - b. Length
 - c. Mass
 - d. Area
2. The term *slaking* refers to
 - a. Adding acid to a base
 - b. Adding acid to water.
 - c. Adding quicklime to water.
 - d. Adding water to salt.
3. If an air relief valve is needed in a force main, it should be installed
 - a. At the lowest point in the force main.
 - b. Just after the pump.
 - c. At the high point in the force main
 - d. Anywhere, it doesn't mater.
4. How many kilowatts of electricity must be available to drive a pump that moves 150 gallons per minute against a head of 35 feet if the combination of the pump and motor are 66% efficient?
 - a. 0.75 kW
 - b. 1.0 kW
 - c. 1.5 kW
 - d. 2.37 kW

Dick Darling

Public Law 500

Public Law 500 “An Act to Amend the Water Quality Laws to Establish a New Standard for Mercury Discharges” requires any facility that discharges under section 413 to prepare and implement a pollution prevention plan in order to reduce mercury discharges to the waters of Maine. The pollution prevention plan shall be consistent with model plans developed by the department. A model plan will be mailed to you in December.

A well-organized and planned pollution prevention program can reduce the cost of managing waste, reduce environmental liability, improve public perception and, most importantly, protect our health and environment. The model plan and guidance document will provide an outline for drafting a plan and contain source identification materials for potential sources that may discharge to municipal treatment plants.

These plans are to be implemented while statewide, risk-based criteria are being developed. Facilities that are part of this program shall provide information concerning the status of implementation of the mercury pollution prevention plan by December 15, 1999 and December 15, 2000.

The law also requires that the DEP establish new interim limits for each POTW. The data used to establish the limits and subsequent compliance monitoring data can be used to establish a baseline and measure the success of reduction efforts.

Pollution prevention encourages the use of non-polluting technologies and waste minimization, promotes the sustainable use of natural resources and protection of the

environment through conservation, recycling and material reuse, and includes environmental and economic considerations when evaluating processes.

The State of Maine encourages reduction of mercury at the source as the preferred method of environmental protection over traditional treatment and disposal whenever possible. Pollution prevention programs can achieve and go beyond compliance with state and federal environmental laws. The Department of Environmental Protection's pollution prevention program starts with the premise that additional reduction of pollutants can be achieved, beyond that which is required by law, through cooperative joint ventures between the publicly owned treatment works (POTW), industries and the state's environmental program staff. Cooperative pollution prevention efforts can be used to examine the processes, operation and maintenance within a community or facility to identify and implement feasible opportunities for reduction of mercury.

Don Albert

Answers to For Practice:

1. c. The term *mg* or *milligrams* is a measure of mass. 1 milligram equals 1/1000 grams.
2. c. Slaking is the process of adding quicklime to water to make a slurry.

3. c. Since air is less dense than water and will naturally rise to the highest point in a pipe, the relief valve should be placed at the highest point along the force main.
4. c. The horsepower required to lift the water = $(150 \text{ gpm} \times 35 \text{ ft}) / (3,960)$
= 1.33 HP The pump and motor system are 66% efficient, so the power necessary from the electric system is $(1.33 \text{ HP} \times .746 \text{ kW/HP}) / 0.66 = 1.5 \text{ kW}$

Dick Darling